

# A Study on Occupational Stress of Lecturers and Physicians

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## ABSTRACT:

**Background:** Modern life is full of stress. It can be both pleasant and unpleasant. It could be deleterious for an individual or for other a mare hassles of life. Occupational stress is an important, current problem because the rates of temporary incapacitation, absenteeism and early retirement, among others, in the workforce are alarming. This research attempted to determine the occupational stress of Lectures and Physicians. **Method:** To investigate the occupational stress of lecturers and physicians, sample was comprised of 100 subjects and was divided according to their profession, lecturers and physicians (50 from each group). Srivastava, A.K and Singh, A.P (1984) Occupational Stress Index (OSI) was administered on them. Data were treated with the help of Mean, SD, t and correlation statistical techniques. **Results:** The difference in sub-scales of occupational stress between the groups was found statistically significant, and the score of the physicians were higher than that of the lecturers. Analysis of the items of occupational stress index revealed that the scores of role overload, role ambiguity, low status, strenuous working conditions and unprofitability were higher in physicians than in lecturers. The subscales of occupational stress index for lecturers and physicians were positively correlated with each other.

**Keywords:** Occupational Stress, Lecturers, Physicians, Sub-scales of occupational stress.

## INTRODUCTION

Stress, in general, and occupational stress, in particular, is a fact of modern day life that seems to have been on the increase. The topic is, therefore, still popular, although it occupies academics' and practitioners' attention now for more than half a century.

Numerous studies have explored stress, primarily from the psychological, sociological, and medical perspective. From the business perspective, researchers dealt with the issue of occupational stress, as job/work causes a great deal of stress to contemporary employees. As well, there is a vast amount of research on individual differences involved in the work-stress process. Researchers have studied individual differences in the belief that they influence reactions to objectively stressful events or appraisals of events as being stressful, or they simply add to the variance explained in the stress outcomes [1]

Occupational (job, work or workplace) stress has become one of the most serious health issues in the modern world [2], as it occurs in any job and is even more present than decades ago. Namely, the world of work differs considerably from the working environment of 30 years ago; longer hours at work are not unusual, frequent changes in culture and structure are often cited, as well as the loss of lifetime career paths [3], which all lead to greater presence and levels of stress.

Stress at work resulting from increasing complexities of work and its divergent demand, has become a prominent and pervading feature of the modern organizations. The researchers in the area of organizational psychology and management have used the term job stress to denote employees' mental state aroused by a job situation or a combination of job situations perceived as presenting excessive and divergent demands. Occupational stress is defined as

'any characteristics of job environment which poses a threat to the individual' [4].

## OCCUPATIONAL STRESS AND THE UNIVERSITY PROFESSORS

Teaching profession was once viewed as a 'low stress occupation' [5] and they have been envied for tenure, light workloads, flexibility and other perks such as foreign trips for study and conference [6]. However, recent studies have demonstrated that university professors experience levels of stress that are unparalleled in any other employed group of individuals. University professors tend to experience higher than normal levels of stress and these high levels of stress have increased over the last 6 years. The overall stress level of professors is now second only to the recently unemployed when compared to other professions [7]. Increasing numbers of academic positions are now untenured, workloads have increased and academics are under increasing pressure to 'publish or perish' [6]. Researchers studied full-time journalism and mass communication faculty. Ninety-seven percent reported that they experience work related stress and due to this they had a negative impact on their perceptions of themselves and their work [8].

Research on stress among academic and general staff of universities from across the globe indicates that the phenomenon of occupational stress in universities is alarmingly widespread and increasing [6]. Research conducted in the UK, USA, New Zealand, and Australia has identified several key factors commonly associated with stress among academic and general staff. These include, work overload, time constraint, lack of promotion opportunities, inadequate recognition, inadequate salary, changing job role, inadequate management or participation in management, inadequate resources and funding and student interaction [9].

Other sources of stress, such as work-related technology [10], Family life and work balance [7], years of experience [11], Job-type category [12], control over the work environment [13] and person-environment fit [7], have been highlighted in few studies. University faculty plays a vital role in the creation and dissemination of knowledge and innovation, in addition to education and training. Above cited research demonstrated that high levels of occupational stress, if left unchecked and unmanaged, it will undermine the quality, productivity and creativity of employees' work, and employees' well being [9].

### OCCUPATIONAL STRESS AND PHYSICIANS

Physicians are exposed to many stressors, such as the burden imposed by expectations of a high degree of professionalism, responsibility for patient well-being and maintenance of relationships with patients and health workers, as well as concerns about medical errors and malpractice litigation [14, 15]. It has been reported that such occupational stresses (OSs) are associated with depression among physicians [16, 17, 18, 19, 20]. However, the participants in previous studies have been limited to specific populations of physicians such as residents, those with fewer years of experience [16,19], physicians in particular medical specialties [17] and general practitioners [14,20]. Therefore, whether the results of these studies can be extrapolated to a broader population of physicians remains unclear. To date, several models for evaluating OS have been established. The effort–reward imbalance (ERI) model [21] is characterized by the evaluation of reward and assessment of the intrinsic or personal characteristics of coping with various job demands and eliciting rewards, a feature not found in other models [22,23]. Furthermore, the ERI model is considered more suitable for assessing stress among professionals, particularly those dealing with individual-based interactions [24]. The ERI model has been demonstrated to have greater explanatory power than the demand-control model for evaluating OS among physicians [25]. Thus, the ERI model appears to be appropriate for evaluating OS among physicians, but only a few studies to date have examined depression among physicians using this model [16, 19].

Social support (SP) is known to act as a buffer factor in stress reactions to occupational stressors [23], and a similar relationship has been proposed with regard to depression [19, 26]. However, it has not been determined whether SP also acts as a buffer factor in depression for physicians who work longer hours.

Keeping in view, the problem is selected and study matter is made in the present research. The aim of this study is to assess and compare the occupational stress

of lecturers and physicians and find out the relationship among the subscales of occupational stress.

### OBJECTIVES:

There are three main objectives studied in this paper:

1. To measure the occupational stress of lecturers and physicians.
2. To compare occupational stress of lecturers and physicians.
3. To investigate the relationship among subscales of occupational stress of lecturers and physicians.

### HYPOTHESIS

The above aims enable us to formulate following hypothesis:-

1. Lectures and physicians will differ significantly on occupational stress.
2. The 12 subscales of occupational stress will significantly correlated with each other.

### METHOD

#### RESEARCH DESIGN

This study adopted a survey research design that utilised questionnaires to obtain data from the respondents.

#### SAMPLE

This study was carried out using a randomized sample of 100 participants that included 50 lecturers and 50 physicians working in colleges and hospitals of haridwar, rishikesh and roorkee.

#### TOOL USED

The Occupational Stress Index (Srivastava, A.K., and Singh, A.P., 1984) was used for data collection. The scale consists of 46 items, each to be rated on the five point scale. Out of 46 items 28 are 'True – Keyed' and last 18 are 'False – Keyed'. The items relate to almost all relevant components of the job size which cause stress in some way or the other, such as, role over-load, role ambiguity, role conflict, unreasonable group and political pressure, responsibility for persons, under participation, powerlessness, poor peer relations, intrinsic, impoverishment, low status, strenuous working conditions and unprofitability.

The reliability index ascertained by split half (odd-even) method and Cronbach's Alpha Coefficient for the scale as a whole were found to be .935 and .90 respectively. The validity of the instrument was determined by computing coefficient of correlation between the scale on the OSI and various measures of job attitudes and job behaviour. The levels of occupational stress were categorized on the basis of percentile values as Low (P-25 and below with the scores between 46-127), Moderate (P-26 to P-75 with

the scores between 128-150) and High ( P-76 and above) with the score of 151 to 230.

### STATISTICAL ANALYSIS

The collected data were classified and tabulated in accordance with the objectives to arrive at the meaningful and relevant inferences by using arithmetic mean, standard deviation, t-test and correlation.

### RESULTS AND INTERPRETATION

The data was subjected to the statistical analysis techniques of the two independent sample t –test and Correlation. First, t-tests were conducted to assess the differences between lecturers and physicians on the above variables for the sample as a whole. Then a correlation was conducted to assess the relationship between subscales of occupational stress of lecturers and physicians.

The results of the t-tests for the sample as a whole are presented in Table I. As can be seen from this table, significant differences emerged on five of the variables. The ‘t’ values on the sub-scales of role overload ( $t=4.51$ ;  $p<0.01$ ), role ambiguity ( $t=2.11$ ;  $p<0.05$ ), low status ( $t=2.21$ ;  $p<0.05$ ), strenuous working condition ( $t=4.43$ ;  $p<0.01$ ) and on unprofitability ( $t=2.98$ ;  $p<0.01$ ) indicate significant difference between lecturers and physicians. Mean scores on the above sub-scales confirmed that the physicians found to have experienced more occupational stress than the lecturers. Results clearly indicate that physicians were experiencing more stress due to role overload, role ambiguity, low status, strenuous working condition and unprofitability as compared to lecturers.

Table 2 provides the correlation coefficients of the study variables. Role overload was statistically significantly related to role ambiguity, role conflict, unreasonable group and political pressure, strenuous working condition and unprofitability. Role ambiguity was also significantly related to role conflict ( $r=.621$ ;  $p>0.01$ ), under participation ( $r=.268$ ,  $p>0.01$ ), powerlessness ( $r=.371$ ,  $p>0.01$ ), poor peer relations ( $r=.303$ ,  $p>0.01$ ), intrinsic impoverishment ( $r=.594$ ,  $p>0.01$ ), low status ( $r=.442$ ,  $p>0.01$ ), strenuous working condition ( $r=.533$ ,  $p>0.01$ ) and unprofitability ( $r=.402$ ,  $p>0.01$ ). Role conflict was statistically and practically significantly related to the following stressors: under participation ( $r=.249$ ,  $p<0.05$ ), powerlessness ( $r=.310$ ,  $p>0.01$ ), poor peer relations ( $r=.246$ ,  $p>0.05$ ), intrinsic impoverishment ( $r=.353$ ,  $p>0.01$ ), low status ( $r=.313$ ,  $p>0.01$ ), strenuous working condition ( $r=.382$ ,  $p>0.01$ ) and unprofitability ( $r=.362$ ,  $p>0.01$ ). Unreasonable group and political pressure was also significantly related to responsibility for persons ( $r=.211$ ,  $p>0.05$ ), poor peer relations ( $r=.232$ ,  $p>0.05$ ), intrinsic impoverishment ( $r=.291$ ,

$p>0.01$ ) and strenuous working conditions ( $r=.272$ ,  $p>0.01$ ). Under participation was statistically and practically significantly related to the following stressors: powerlessness( $r=.458$ ,  $p>0.01$ ), poor peer relations ( $r=.239$ ,  $p>0.05$ ) and intrinsic impoverishment ( $r=.460$ ,  $p>0.01$ ). Powerlessness was significantly related to intrinsic impoverishment ( $r=.358$ ,  $p>0.01$ ) and unprofitability ( $r=.219$ ,  $p>0.05$ ). Poor peer relations was statistically and practically significantly related to the following stressors: Intrinsic Impoverishment ( $r=.378$ ,  $p>0.01$ ), low status ( $r=.568$ ,  $p>0.01$ ) and strenuous working conditions ( $r=.345$ ,  $p>0.01$ ). Intrinsic Impoverishment was statistically significantly related to Low Status ( $r=.570$ ,  $p>0.01$ ), strenuous working condition ( $r=.545$ ,  $p>0.01$ ) and unprofitability ( $r=.281$ ,  $p>0.01$ ). Low Status was significantly related to strenuous working condition ( $r=.531$ ,  $p>0.01$ ) and unprofitability ( $r=.280$ ,  $p>0.01$ ). Strenuous working condition was significantly related to unprofitability ( $r=.385$ ,  $p>0.01$ ).

### DISCUSSION

The present study was aimed at comparing the occupational stress of lecturers and physicians. According to the results of the study as shown in table 1, the scores of physicians are higher as compared to lecturers on various subscales of occupational stress, i.e. role overload, role ambiguity, low status, strenuous working condition and unprofitability. This is indicative of the fact that physicians are experiencing more occupational stress than lecturers.

In a study of stress among private practitioners by 39% of participants reported working more than 50 hours per week. The long hours of work they reported (more than is recommended by the Department of Labour) are primarily due to hospital work or after-hours work outside the hospitals. Researchers studying workload and stress in UK consultant medical doctors ( $N=464$ ), found that 56% were working more than 48 hours a week [27, 28].

All the doctors (about 90%) who responded perceive themselves to be stressed at work. This may mean that they are unhappy at work but not objectively stressed as yet, and probably implies that at present they can cope with their working situation and still feel that they are playing a valuable role at work [28]. 78.3% of participants reported perceiving themselves as being stressed. These doctors may be at risk of work-related stress and would benefit from stress-relieving and coping strategies before they reach burnout or become totally disillusioned with working as a doctor [29].

Job satisfaction is a major factor in the risk of work-related stress among doctors [30]. The majority of doctors (87%) performed after-hours work and 55% reported studying after hours as well, which implies

that doctors do seem to be overworked. They found that the doctors were more likely to be stressed if they work after hours [28].

In this study we also found relationship among 12 subscales of occupational stress of physicians and doctors. A positive and significant relationship found among various subscales of occupational stress. A positive relationship found between long hours worked and level of stress. It was found that doctors who work more hours per week are more likely to be stressed than those who work fewer hours [31].

### LIMITATIONS AND IMPLICATIONS FOR FUTURE RESEARCH

In this study, lecturer and physician participation was voluntary and was conducted in haridwar, rishikesh and roorkee. So, the findings should be interpreted

with caution as the participants were from a particular state and do not represent all lecturers and physicians from Kingdom. More studies of on this topic are needed with samples, which are large enough to detect statistically significant associations between the variables under investigation.

Another potential limitation of this study includes the scope of the research. This study aims to explore the occupational stress level of lecturers and physicians. Future research also needs to explore the further testing on the effects of sub-variables, Job ranks (such as Instructor, Lecturer, Assistant professor, Professor) and University and hospital status (Public or Private), faculty workload, physician workload and administrative work, that were not explored in the current study, which can also directly or indirectly influence the lecturers and physician stress level.

**TABLE 1: MEANS, STANDARD DEVIATIONS AND t-VALUE OF LECTURERS AND PHYSICIANS ON OCCUPATIONAL STRESS SCALE.**

Occupational Stress	Profession	N	Mean	SD	t
Role Overload	Lecturer	50	15.7600	3.89956	4.51**
	Physician	50	18.8400	2.84540	
Role Ambiguity	Lecturer	50	9.4000	2.84999	2.11*
	Physician	50	10.7000	3.29657	
Role Conflict	Lecturer	50	12.5200	2.75711	1.23
	Physician	50	13.3200	3.66138	
Unreasonable grp & Pol. Pressure	Lecturer	50	11.2400	3.47915	.21
	Physician	50	11.3800	3.08975	
Responsibility for Persons	Lecturer	50	9.3800	2.12747	.23
	Physician	50	9.5000	2.98465	
Under Participation	Lecturer	50	11.2800	3.82814	.41
	Physician	50	10.9800	3.44336	
Powerlessness	Lecturer	50	9.1400	3.08393	.80
	Physician	50	8.6800	2.65299	
Poor Peer Relations	Lecturer	50	10.0200	3.99740	1.32
	Physician	50	10.9800	3.22927	
Intrinsic Impoverishment	Lecturer	50	9.9600	3.56262	.05
	Physician	50	9.9200	3.64686	
Low Status	Lecturer	50	7.1200	2.73033	2.21*
	Physician	50	8.7400	4.40227	
Strenuous working condition	Lecturer	50	8.9600	2.70268	4.43**
	Physician	50	12.0400	4.10555	
Unprofitability	Lecturer	50	5.6000	2.16654	2.98**
	Physician	50	6.7600	1.69706	
Total	Lecturer	50	124.0200	24.56685	1.17
	Physician	50	129.8800	25.16934	

**TABLE 2: CORRELATION MATRIX OF OCCUPATIONAL STRESS OF LECTURERS AND PHYSICIANS**

	Role Overload	Role Ambiguity	Role Conflict	Unreasonable grp & Pol. Pressure	Responsibility for Persons	Under Participation	Powerlessness	Poor Peer Relations	Intrinsic Impoverishment	Low Status	Strenuous working condition	Unprofitability
Role Overload	1.00	.269**	.261**	.255*	.089	-.095	-.068	.149	.155	.190	.404**	.314**
Role Ambiguity		1.00	.621**	.158	-.036	.268**	.371**	.303**	.594**	.442**	.533**	.402**
Role Conflict			1.00	.159	.002	.249*	.310**	.246*	.353**	.313**	.382**	.362**
Unreasonable grp & Pol. Pressure				1.00	.211*	.180	.123	.232*	.291**	.136	.272**	.085
Responsibility for Persons					1.00	-.042	.078	-.171	-.093	-.069	.051	-.085
Under Participation						1.00	.458**	.239*	.460**	.011	.188	.128
Powerlessness							1.00	.171	.358**	.076	.003	.219*
Poor Peer Relations								1.00	.378**	.568**	.345**	.181
Intrinsic Impoverishment									1.00	.570**	.545**	.281**
Low Status										1.00	.531**	.280**
Strenuous working condition											1.00	.385**
Unprofitability												1.00

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